Winter 2007

CS 242-01: Computer Science III

Eric Maston
Wright State University - Main Campus

Computer Science III
Winter Quarter 2007
Wright State University

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Course Description

This is the third and final course in the Introduction to Computer Science series. This course focuses on data structures with abstract data types, such as trees, stacks, queues and tables.

Goals

There are several goals in CS 242:
1. Enhance basic coding techniques and skills in C++.
2. Learn how and when to use data structures in C++.
3. Continue learning about Integrated Development Environments (IDE) such as Visual C++.
4. Learn how to develop complex software programs.
5. Have some fun!

Class Details

Lecturer: Eric Matson
Office: 336 Russ Engineering Center
Phone: 937-775-5108
Office Hours: Monday/Wednesday 4:00 - 5:45 at Russ 336 or by appt.
Email: eric.matson@wright.edu
Web: http://agents.cs.wright.edu/index.html
Class: 6:05 - 7:20 Rike 072
Text: Data Abstraction and Problem Solving with C++, 4th Edition, Carrano and Prichard, 2005.
IDE: Microsoft C++ .NET

Prerequisites

For this class the official prerequisite is CS 241. Please let me know the first lecture if you do not meet this prerequisite, and we can talk about your preparation if it differs. This section of CS 242 will be taught using the C++ programming language.

Grading

Lab Assignments 24%
Programming Projects 36%
Midterm Exam 20%
Final Exam 20%

The base scale is: A: 90-100, B: 80-89, C: 70-79, D: 60-69, F: 0-59. This is the highest requirement that will be used. The scales may be lowered or revised if necessary.

Schedule

(always subject to changes) Always have readings scheduled for that day complete prior to the class meeting

#	Date	Topic	Reading
1	Jan 3	Introduction	Chapter 1
2	Jan 8	Software Engineering and Design	Chapter 3
3	Jan 10	C++ Templates/Exceptions, Recursion	Chapter 2
4	Jan 15	NO CLASS - MLK Holiday	
5	Jan 17	Recursion	Chapter 5
6	Jan 22	Stack ADT	Chapter 6
7	Jan 24	Stack Applications	
8	Jan 29	Queue ADT	Chapter 7
9	Jan 31	Queue Applications	
10	Feb 5	Midterm Examination	
11	Feb 7	Searching	Chapter 9
12	Feb 12	Sorting	
13	Feb 14	Computational Complexity	
14	Feb 19	Computational Complexity	
15	Feb 21	General Trees	Chapter 10
16	Feb 26	Trees	
17	Feb 28	Binary Trees	
18	March 5	Binary Trees	
19	March 7	Trees	
20	March 12	Table ADT	Chapter 11
21	March 14	Final Exam	8:00 - 10:00 pm

Policies and Notes

- Attendance: Attendance is not required, nor will it be taken after the first couple of lectures. If you are not a regular attendee, it will be your responsibility to seek out what material was covered in the lecture and learn it. Most of my exam questions will be taken directly from ideas covered during the lecture, so it greatly helps if you attend!
- I will utilize WebCT to post updates to the course, sample code, projects, announcements, schedule, etc. Get in the habit of checking it regularly.
- The prerequisites of the course are basic understanding of high-level development in C++ and object oriented concepts. If you are not confident in your skills or do not have the required prerequisites, then visit with me and I can evaluate how to catch your skills up the appropriate level and develop a plan to do so.
- Always make back ups of all of you work. Never have just one copy of anything!
- If you are going to miss an exam, for any reason, discuss it with me in advance. If it is an emergency situation, please notify me as soon as possible.
- You can reach me a number of ways. Email is normally the best as I check it about 18 hours a day normally. You can also reach me by phone during the day at 775-5108. If you need human contact either stop in during my office hours, make an appointment, or just come by my office. If I am in and not on a deadline to get something else completed, I will normally try to help as much as possible.
- There are technologies we will use in this class that you may not already know, such as file transfer, command line, text editors, file systems, etc. We will cover some of these technologies as we go.
- The key to learning in this class will be spending time working through the problems. Dont wait until 2 hours before something is due to try to learn the concept and then write the program. This normally ends in a disaster! Stay up with the readings and try to work through some of the examples in the book.

Academic Misconduct

In this class, the only way to truly learn the concepts to is do the work yourself. I encourage working with other people on the course concepts. When you begin to write the program, complete and submit your own work.

Work that has obviously been copied or in the more extreme case, when the original authors name has not even been changed, both parties will receive a 0 grade for that assignment. Both parties will also be turned over to the Office of Judicial Affairs.